Sheet 1 of 7 Docket No. Serial No. ISPH-0463 09/575,554 Applicant MONIA ET AL. Filing Date Group 1655 MAY 22, 2000 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Anfossi et al., "An Oligomer Complementary to c-myb-encoded mRNA inhibits proliferation of human myeloid leukemia cell lines", Proc. Natl. Acad. Sci. 1989, 86, 3379-3383 Borer, P.N., Dengler, B., Tinoco, I., Jr., and Uhlenbeck, O.C., "Stability of Ribonucleic acid Doublestranded Helices", J. Mol. Biol., 1974, 86, 843-853 Brown et al., "Modulation of ras Expression by Antisense, Nonionic Deoxyoligonucleotide Analogs", Oncogene Research 1989, 4, 243-252 Capon et al., "Complete nucleotide sequence of the T24 human bladder carcinoma oncogene and its normal homologue", Nature 302 1983, 33-37 Chang et al., "Comparative inhibition of ras p21 protein synthesis with phosphorus-modified antisense oligonucleotides", Anti-Cancer Drug Design 1989, 4, 221-232 Chang et al., "Antisense inhibition of ras p21 expression that is sensitive to a point mutation", Biochemistry 1991, 30, 8283-8286 Chiang et al., "Antisense Oligonucleotides Inhibit Intercellular Adhesion Molecule 1 Expression by Two Distinct Mechanisms", J. Biol. Chem. 1991, 266:18162-18171 De Mesmaeker et al., "Antisense Oligonucleotides", Acc. Chem. Res. 1995, 28:366-374

EXAMINER

Acids Res. 1983, 11, 1475-1489

Form PTO-1449 Modified

List of Patents and Publications

U.S. Department of Commerce

AA

AB

AC

ΑD

ΑE

ΑF

AG

AΗ

ΑI

Cited by Applicant (Use several sheets if necessary)

DATE CONSIDERED

Dignam et al., "Accurate transcription initiation by RNA polymerase

II in a soluble extract from Isolated mammalian nuclei", Nucleic

Plach

Sheet 2 of 7

List of P Ci (Use seve U.S. Depa Patent an	atentited ral s	ts and Publications by Applicant sheets if necessary) at of Commerce ademark Office	Docket No. ISPH-0463 Applicant MONIA ET AL. Filing Date MAY 22, 2000 Title, Date, Perti	Serial No. 09/575,554  Group 1655 nent Pages, Etc.)		
1	AJ	Feramisco et al., "T induced cell transfo amino acid 12 of <i>ras</i>	ormation by antibodi	es specific for		
	AK	Gebeyehu, G., et al. analogs for labeling Nucl. Acids Res. 198	g and colorimetric d			
	AL	Georges, R.N. et al., "I Growth by Intratracheal ras Construct", 1993, Ca	Instillation of a Retro	oviral Antisense K-		
	AM	Greenberg, M.E., in Current Protocols in Molecular Biology, (F.M. Ausubel, R. Brent, R.E. Kingston, D.D. Moore, J.A. Smith, J.G. Seidman and K. Strahl, eds.), John Wiley and Sons, NY				
	AN	Hall et al., "Identification of transforming gene in two human sarcoma cell lines as a new member of the ras gene family located on chromosome 1", Nature 1983, 303: 396-400				
	AO	Hall and Brown, "Human N-ras: cDNA cloning and gene structure", Nucleic Acids Res. 1985, 13, 5255-5268				
	AP	Holt et al., "An Oligomer Complementary to c-myc mRNA Inhibits Proliferation of HL-60 Promyelocytic Cells and Induces Differentiation", Mol. Cell Biol. 1988, 8, 963-973				
	AQ	Kabanov et al., "A new class of antivirals: antisense oligonucleotides combined with a hydrophobic substituent effectively inhibit influenza virus reproduction and synthesis of virus-specific proteins in MDCK cells", FEBS Lett. 1990, 259, 327-330				
	AR	Kahn et al., The c-K-ras gene and human cancer (review), Anticancer Res. 1987, 7, 639-652				
EXAMINER		~	DATE CONSIDERED	> hoh		

i

Sheet 3 of 7

			Sheet 3 of 7		
Form PTO-1449	Modified	Docket No. İSPH-0463	Serial No. 09/575,554		
List of Patents and Cited by App (Use several sheets	licant	Applicant MONIA ET AL.			
U.S. Department of C	ommerce	Filing Date MAY 22, 2000	Group 1655		
OTHER DOCUMENTS (Inc	luding Author,	Title, Date, Perti	nent Pages, Etc.)		
AS Kawasaki et al., "Uniformly Modified 2'-Deoxy-2'-fluoro Phosphorothioate Oligonucleotides as Nuclease-Resistant Antisense Compounds with High Affinity and Specificity for RNA Targets", J. Med. Chem. 1993, 36, 831-8					
R. Bren	n, R.E., in <i>Current</i> t, R.E. Kingston, D eds.), John Wiley	Protocols in Molecular B.D. Moore, J.A. Smith, J.C. and Sons, NY.	iology, (F.M. Ausubel, G. Seidman and K.		
	Kornberg, A., DNA Replication, W.H. Freeman & Co., San Francisco, 1980, pp 75-77				
Oligor	Lima et al., "Implication of RNA Structure on Antisense Oligonucleotide Hybridization Kinetics", <i>Biochemistry</i> <b>1992</b> , 31, 12055-12061				
propert.	Letsinger et al., "Cholesteryl-conjugated oligonucleotides: Synthesis, properties, and activity as inhibitors of replication of human immunodeficiency virus in cell culture", <i>Proc. Natl. Acad. Sci.</i> USA 1989, 86, 6553-6556				
Tumorig	Mukhopadhyay, T. et al., "Specific Inhibition of K-ras Expression and Tumorigenicity of Lung Cancer Cells by Antisense RNA", (1991) Cancer Research 51, 1744-1748				
	Martin, P., "Ein neuer Zugang zu 2'-O-Alkylribonucleosiden und Eigenschaften deren Oligonucleotide", Helv. Chim. Acta 1995, 78, 486-504				
	Manoharan et al., "Cholic Acid-Oligonucleotide Conjugates for Antisense Applications", Bioorg. Med. Chem. Let. 1994, 4, 1053-1060				
Minor G	BA Manoharan et al., "Introduction of a Lipophilic Thioether Tether in the Minor Groove of Nucleic Acids for Antisense Applications", Bioorg. Med. Chem. Let. 1993, 3, 2765-2770				
EXAMINER	EXAMINER DATE CONSIDERED 3/4/L				

Sheet 4 of 7

Form PTO-1449 Modified		Docket No.	Serial No.				
List of Patents and Publications			ISPH-0463	09/575,554			
Cited by Applicant (Use several sheets if necessary)			Applicant MONIA ET AL.				
(Use seve	rai s	sneets if necessary)		G			
U.S. Depai	rtmer	nt of Commerce	Filing Date MAY 22, 2000	Group 1655			
OTHER DOCU	JMENT	IS (Including Author,	Title, Date, Perti	nent Pages, Etc.)			
N	BB	Manoharan et al., "A Acad. Sci. <b>1992</b> , 660	_	s", Ann. N.Y.			
	ВС	Manoharan et al., "I Lett. <b>1995</b> , 36, 3651	- ·	ds", Tetrahedron			
	BD	Manoharan et al., "Oligonucleotides Conjugates: Alteration of the Pharmacokinetic Properties of Antisense Agents", Nucleosides & Nucleotides 1995, 14, 969-973					
	BE	human Ki- <i>ras</i> proto-c	AcGrath, J.P. et al., "Structure and organization of the numan Ki-ras proto-oncogene and a related processed oseudogene", Nature 1983, 304, 501-506				
	BF	Nielsen et al., "Sequence-Selective Recognition of DNA by Strand Displacement with a Thymine-Substituted Polyamide", Science 1991, 254, 1497					
	BG	Oberhauser et al., "Effective incorporation of 2'-O-methyl- oligoribonucleotides into liposomes and enhanced cell association through modification with thiocholesterol", <i>Nucl. Acids Res.</i> 1992, 20, 533-538					
	вн	Owen et al., "Transcriptional activation of a conserved sequence element by ras requires a nuclear factor distinct from c-fos or c-jun", Proc. Natl. Acad. Sci. U.S.A. 1990, 87, 3866-3870					
	BI	Petersheim, M. and Turner, D.H., "Base Stacking and Base-Pairing Contributions to Helix Stability: Thermodynamics of Double-Helix Formation with CCGG, CCGGp, CCGGAp, ACCGGp, CCGGUp, and ACCGGUp", Biochemistry 1983, 22, 256-263					
	ВЈ	Puglisi and Tinoco, "Absorbance Melting Curves of RNAs", Methods in Enzymol. 1989, 180, 304-325					
EXAMINER	EXAMINER DATE CONSIDERED 3 hoh						

Sheet 5 of 7

Form PTO-1449 Modified		Docket No.	Serial No.		
List of Patents and Publications Cited by Applicant (Use several sheets if necessary)		Applicant MONIA ET AL.			
U.S. Dėparti	ment of Commerce	Filing Date	Group 1655		
	Trademark Office ENTS (Including Author,	MAY 22, 2000 Title, Date, Perti	·		
1 B1		mutation is responsible for t	the acquisition of		
Bi	Sanghvi et al., "Antisense ol biological evaluation of olig Nucl. Acids Res. 1993, 21, 31	odeoxynucleotides containing			
BI	Antisense Research	Sanghvi, Y.S., in Crooke, S.T. and Lebleu, B., eds.,  Antisense Research and Applications, CRC Press, Boca Raton, 1993, pp. 276-288			
BI	against Ha-ras point mutation	Saison-Behmoaras, T. et al., "Short modified antisense oligonucleotides directed against Ha-ras point mutation induce selective cleavage of the mRNA and inhibit T24 cells proliferation", EMBO J. 1991, 10, 1111-1118			
В	Normal Hematopoiesis	Skorski, et al., "Growth Factor-dependent Inhibition of Normal Hematopoiesis by N-ras Antisense Oligodeoxynucleotides", J. Exp. Med., 1992, 175, 743-750			
В	MT-4 cells by antise	Svinarchuk et al., "Inhibition of HIV proliferation in MT-4 cells by antisense oligonucleotide conjugated to lipophilic groups", <i>Biochimie</i> 1993, 75, 49-54			
B(	activity of lipid-o	Shea, "Synthesis, hybridization properties and antiviral activity of lipid-oligodeoxynucleotide conjugates", et al. Nucl. Acids Res. 1990, 18, 3777-3783			
BI		Tidd et al., "Evaluation of N-ras oncogene anti-sense, sense and nonsense sequence methylphosphonate oligonucleotide analogues", Anti-Cancer Drug Design 1988, 3, 117-127			
BS	BS Tabin, C.J. et al., "Mechanism of activation of a human oncogene", Nature 1982, 300, 143-149				
EXAMINER	~	DATE CONSIDERED	Yulu		

Sheet 6 of 7

Form PTO-1449 Modified  List of Patents and Publications Cited by Applicant  (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office  Patent and Trademark Office  DOTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)  BT Taparowsky, E. et al., "Activation of the T24 bladder carcinoma transforming gene is linked to a single amino acid change", Nature 1982, 300, 762-765  BU Taparowsky et al., "Structure and Activation of the Human N-ras Gene", Cell 1983 34: 581-6  BV Protein expression are inhibited by an antisense pentadencomyncleocide targeted against c-myc mental patency pentadencomyncleocide targeted against c-myc mental patency pentadencomyncleocide targeted against c-myc mental patency pentadencomyncleocide targeted against c-myc mental patencynchic pental patencynchic pental patency pentadencomyncleocide targeted against c-myc mental patencynchic pental patencynchic pental patencynchic patencynchic patencynchic pental patencynchic pental patencynchic patencync					Sheet 6 of 7			
List of Patents and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office  BT  Taparowsky, E. et al., "Activation of the T24 bladder carcinoma transforming gene is linked to a single amino acid change", Nature 1982, 300, 762-765  BU  Taparowsky et al., "Structure and Activation of the Human N-ras Gene", Cell 1983 34: 581-6  BV  Mickstrom et al., "Human promyelocytic leukemia ML-60 cell proliferation and c-myc protein expression are inhibited by an antisense pentadecadeoxynucleotide targeted against c-myc mNNA", Proc. Nat. Acad. Sci. 1988, 85, 1028-1012	Form PTO-1449 Modified							
U.S. Department of Commerce Patent and Trademark Office  Filing Date Group 1655  OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)  BT Taparowsky, E. et al., "Activation of the T24 bladder carcinoma transforming gene is linked to a single amino acid change", Nature 1982, 300, 762-765  BU Taparowsky et al., "Structure and Activation of the Human N-ras Gene", Cell 1983 34: 581-6  BV Wickstrom et al., "Human promyelocytic leukemia HL-60 cell proliferation and c-myc protein expression are inhibited by an antisense pentadecadeoxymucleotide targeted against c-myc mNNA", Proc. Nat. Acad. Sci. 1988, 85, 1028-1012	Cited by Applicant			Applicant				
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)  BT Taparowsky, E. et al., "Activation of the T24 bladder carcinoma transforming gene is linked to a single amino acid change", Nature 1982, 300, 762-765  BU Taparowsky et al., "Structure and Activation of the Human N-ras Gene", Cell 1983 34: 581-6  BV Mickstrom et al., "Human promyelocytic leukemia HL-60 cell proliferation and c-myc protein expression are inhibited by an antisense pentadecadeoxymucleotide targeted against c-myc mRNA", Proc. Nat. Acad. Sci. 1988, 85, 1028-1012	U.S. Depa Patent an	rtmer d Tra	nt of Commerce ademark Office	Filing Date	i -			
carcinoma transforming gene is linked to a single amino acid change", Nature 1982, 300, 762-765  BU Taparowsky et al., "Structure and Activation of the Human N-ras Gene", Cell 1983 34: 581-6  BV Wickstrom et al., "Human promyelocytic leukemia HL-60 cell proliferation and c-myc protein expression are inhibited by an antisense pentadecadeoxynucleotide targeted against c-myc mRNA*, Proc. Nat. Acad. Sci. 1988, 85, 1028-1032				Title, Date, Perti	nent Pages, Etc.)			
Human N-ras Gene", Cell 1983 34: 581-6  **Note: The control of the	2	ВТ	carcinoma transformi	ing gene is linked t	o a single amino			
protein expression are inhibited by an antisense pentadecadeoxynucleotide targeted against c-myc mRNA*, Proc. Nat. Acad. Sci. 1988, 85, 1028-1032	1	BU						
EXAMINER DATE CONSIDERED >/2/4	1	BV	protein expression are inhibit	ted by an antisense pentadecadeoxynucleotide targeted				
EXAMINER DATE CONSIDERED Toly					·			
EXAMINER DATE CONSIDERED Tryly								
EXAMINER DATE CONSIDERED Tryly								
EXAMINER DATE CONSIDERED Toly								
EXAMINER DATE CONSIDERED Toly		-						
EXAMINER DATE CONSIDERED Troly	~							
EXAMINER DATE CONSIDERED Tryly								
EXAMINER DATE CONSIDERED Troly				· · · · · · · · · · · · · · · · · · ·				
EXAMINER DATE CONSIDERED 7/20/4								
	EXAMINER			DATE CONSIDERED	Planky			

Sheet 7 of 7

Form PTO-1449 Modified			ti .	Docket No. Serial No. 1SPH-0463 09/575,554			01 7			
List of Patents and Publications Cited by Applicant (Use several sheets if necessary)			11	Applicant MONIA ET AL.						
	U.S. Department of Commerce Patent and Trademark Office			11				Group 1655		
	U. S. PATENT DOCUMENTS									
Examiner		Document	Date	Name		Class	s Subc	lass		
1~	AA	4,871,838	10/3/89	Bos et	al.	536	27			
	AB	5,034,506	7/23/91	Summert	on et al.	528	391			
	AC	5,138,045	8/11/92	Cook et	al.	536	27			
/	AD	5,218,105	6/8/93	Cook et	al.	536	25.3	1.		
V	AE	5,378,825	1/3/95	Cook et	Cook et al.		25.34			
N	AF	5,459,255	10/17/95	Cook et	Cook et al.		27.13			
				· · · · · · · · · · · · · · · · · · ·		ļ				
. :		· ·			<del></del>	ļ				
-				<u> </u>						
		F	OREIGN PA	TENT DOCU	MENTS					
Examiner Initial		Document 1	<b>Vo.</b>	Date	Country		Translat YES	ion NO		
2	AG	WO 92/1568	30	9/17/92	PCT		Х			
2	АН	PCT/US88/0	01024	3/22/88			Х			
Λ.	AI	WO 94/2676	54	11/24/94	11/24/94 PCT		Х			
	<u> </u>									
	<u> </u>			<del></del>			/ /			
EXAMINER		V		DATE C	ONSIDERED	31	2-14			